NEFTEL (Wm B,)

ON

PERIODICAL MELANCHOLIA.

BY

WILLIAM B. NEFTEL, M.D.

With compliments of the Author

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WILLIAM B. NEFTEL, M.D.

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ON PERIODICAL MELANCHOLIA.

Among the many cases of intense psychical depression which I have been observing of late, one particular group presents certain characteristic phenomena of great theoretical interest and practical importance. This variety of melancholia I designate by the name of "*periodical melancholia*," and give here, as an illustration of it, the following case:

Mr. H., 48 years old. His father was affected with ossification of the coronary arteries, and died during an attack of angina pectoris, at the age of 73. His mother, now 79 years old, is suffering from melancholia, the first attack of which she had in 1837, the second in 1857, and since then remains melancholic, with only occasional intervals of improvement. Of his three brothers, one died suddenly in his 48th year, the other two and a sister are healthy, though all have a slight tendency to depression of mind.

The patient's health was very good until 1845, when during four months he was dangerously ill with dysentery, from which, however, he entirely recovered. Since 1850 he has had a great deal of pruritus ani, with a mucous discharge. In 1850 he entered the banking business, and filled a position of responsibility, demanding his incessant attention, and a great deal of work. Having experienced much anxiety in his affairs, he had in 1851 an attack of melancholia that lasted two months, after recovery from which he

had, at different times, slight attacks until 1861, when he had a second, more severe. Since then he is alternately healthy during several, at the utmost, five months, and is then affected with melancholia, the attacks lasting from four to eleven months. They come on gradually, the patient feeling at first somewhat depressed in mind, as often happens with healthy persons in consequence of some unpleasant occurrence or physical indisposition, though in this case the depression is without any cause. It continues to increase during several days, until it becomes complete apathy, a perfect indifference to all surroundings, a want of decision, an entire loss of courage, with a dread of something fearful and inevitable.

The patient is then unable to attend to his business or any other occupation; he cannot even read, for his thoughts remain concentrated on his own distressed condition, and as he says, there are no words to describe the intensity of his suffering, that would at times make him prefer death to such a life. He is open to none but the most gloomy impressions, and every diversion in other moods agreeable—for instance, a comedy or any amusement—would during the attack produce upon him quite a painful effect. Nothing remains for him but to lead a life of seclusion, to avoid society and all kinds of pleasant impressions, which seem then only to aggravate his condition. His appetite is bad, the bowels constipated, the sleep insufficient and disturbed by frightful dreams; he feels quite weak, and loses flesh. At the height of the attack he often experiences a feeling of chilliness and shivering, also a great deal of itching; has boils and eruptions all over the body, which is not the case during the intervals. At last his condition becomes unbearable; he passes an entirely sleepless night, and expects the worst results, when suddenly he finds himself re-

freshed and healthy, to use his expression, "As if some obstruction had been suddenly removed." He is thus restored to his normal condition, in which he remains during a few months, when a new attack is sure to follow.

He has been treated by most eminent physicians and neuropathologists, but his affection has never been influenced by the different methods of treatment. Dr. Edward H. Clarke, the distinguished physician of Boston, kindly sent him to me, and Nov. 5th, 1873, I saw the patient for the first time, two months after an attack.

He is of middle size, very thin, anæmic, and flushing quite readily. The skin dry, atrophic, unelastic; the subcutaneous veins dilated; the hair of the whiskers broken and split at the ends, causing them to appear as if strewn with sand. The mucous membranes (of the mouth, conjunctiva) are pale, and the muscular system but little developed. There is no deformity of the ears or of the skull, which latter, on the contrary, is well developed. His appetite is good, with occasional dyspeptic symptoms; bowels somewhat costive, prolapsus ani, with slight mucous discharge from the rectum. His sleep was always deficient, not more than four or five hours in the twenty-four, sometimes even less. Pulse 70, respiration 18, costo-abdominal; temperature, 37° C.; weight, 124 pounds.

He is very intelligent, and of excellent business capacities, and not at all hypochondric, but, on the contrary, of a good and gay disposition, always fond of joking, and never thinks of his attacks until they have actually come on. His general health is good, and he has no disposition to catch cold, though he is not strong, especially in the arms, and complains of a cold feeling in the right foot, and itching on the inner surface of the thighs. His mode of living is very

regular; he is quite temperate, and entirely abstains from sexual intercourse.

As all the different remedies which had been tried have failed to benefit the patient, I resorted at once to the galvanic treatment, and prescribed at the same time a tonic régime, warm baths, and cold douches, exercise in the open air, etc.

He had altogether thirteen galvanic treatments of the head and cervical sympathetic from November 5th to 18th, and, besides, I treated the prolapsus with induced currents. Under this treatment the patient's health greatly improved: he felt strong, and could walk long distances; his appetite and digestion became good, bowels regular, and the prolapsus very much diminished; he slept seven hours every night, which he had never done in previous intervals. The anæmia disappeared, the pulse became fuller, and the veins less dilated; the skin moist; the hair assumed a natural appearance; he had no more itching, and gained flesh, weighing one hundred and twenty-nine pounds. He felt quite well, and returned to his home.

I advised him to come occasionally to New York and continue the galvanic treatment, in order to prevent, if possible, the recurrence of an attack. But owing to the illness of his partner he had to devote all his time to business affairs; and finding that his health continued to improve, and that he could sleep more than seven hours, he thought he would postpone a prolonged treatment until a more convenient moment, and therefore had but four treatments in December and two in February. His health remained excellent during seven months, from September to April, the longest interval he had had since 1861 (the other intervals being from two to five months), when a new attack manifested itself, and the patient returned to my care. I used the same methods of treat-

ment as before (galvanization of the head, sympathetic, etc.), but produced no beneficial effect. I then tried the so-called central galvanization and general faradization, also galvanization of the cord, and all the known electro-therapeutic methods, without the least benefit. On the contrary, the patient grew constantly worse; he lost flesh, became anæmic, the sleep unrefreshing and insufficient, the appetite bad. His intellect, however, remained undisturbed; he perfectly well understood that there was not the slightest material cause for his depression; but it seemed to him that there existed somewhere an obstruction which, if removed, would at once completely liberate him from his intense suffering. He, moreover, felt that this obstruction was not even touched by the treatment. He complained chiefly of want of decision and energy, and entire loss of interest in everything; loss of courage and fear of something dreadful; distress in the præcordial region; impossibility of having any but gloomy ideas; concentration of his whole mind upon his distressed condition, with no power of directing his thoughts to other subjects.

Having exhausted all the known electro-therapeutic methods without avail, I advised the patient to go to the country (to the residence of his brother in Virginia), and try a healthful mode of living; exercise in the open air on foot and on horseback, a nourishing diet, etc. He remained there from April 23d to September 15th without any change in his condition, and at my suggestion returned to New York for further treatment. During his absence I had the opportunity of observing similar cases, and had tried a new method which had proved successful, and which I was anxious to try also in his case. It consists chiefly in the production by the polar method of a condition of anelectrotonus in the cervical sympathetic.

Though his present attack lasted five months, it nevertheless differed in several respects advantageously from all the previous ones. In the first place, the interval between the two last attacks was longer than ever, as it was of seven months' duration. He had not lost so much flesh, and weighed one hundred and twenty-five and one-half pounds, while during the former attacks he would run down to one hundred and seventeen pounds. His appetite and strength were less diminished; the boils, eruptions and itching did not at all return this time, nor did the hair assume the peculiar aspect above described; in fact, all the morbid phenomena within the trophic sphere were less marked than before. He had less dyspepsia and insomnia; the bowels remained regular, while formerly they always were costive; the prolapsus has scarcely troubled him, and perhaps even the depression of mind, profound as it was, did not entirely reach the same degree.

After the first galvanic treatment by the new method he slept well, and felt the next day a great deal better than he had done since the beginning of the attack, though perfectly conscious that it was not yet over. I repeated the same treatment the following days, and his condition continued to improve steadily; he felt more interest in everything, he could read, and even enjoy a theatrical representation, which he could never do during former attacks. After six daily treatments, always followed by a prolonged and refreshing night's sleep, his normal condition was entirely restored. I treated him five days longer, and he left New York in excellent health, and still continues to improve. He has already gained flesh (one hundred and twenty-eight pounds), all his functions are normal, has seven hours of sound sleep, he feels strong, and is in good spirits. He himself ascribes to

the galvanic treatment his present delivery from the attack for the following reasons, in which I entirely concur: Never before had he an interval of seven months. All the former attacks, of which there had been so many within twenty-three years, had terminated suddenly after a sleepless night, during their very acme. This time, on the contrary, the attack ended gradually and slowly, in the course of a week, during which he enjoyed sound and prolonged sleep at night. Moreover, the improvement commenced immediately after the first treatment by the new method, without the least change in his mode of living and without the administration of any other remedy.

The chief points of interest in the described case are:

1. The periodicity of the attacks.

Though repeated attacks of melancholia in the same persons are not unusual, yet they are generally very few and very far apart, and if the patient does not entirely recover, he passes into a permanent state of melancholia, or into some other form of insanity. In our case the attacks recurred yearly during a long period of twenty-three years, and without leading to any secondary affections. The periodical melancholia afforded me an invaluable opportunity for the study of a separate attack in its relation to the healthy intervals, thus throwing some light upon the pathogeny of melancholia in general.

2. Loss of flesh invariably accompanied the attacks, and an increase in weight always followed as soon as they were over. There was not a single exception to this rule, which must therefore be in intimate connection with the phenomena of melancholia. The patient's weight at the acme of the attack was 117, during the interval 129 to 132 pounds.

3. The attack always commences with a subacute

anæmia. The general anæmia continues during the entire attack, and disappears during the interval. The skin, the mucous membranes are pale, the pulse about 55, small and feeble; the veins, on the contrary, dilated and distended with blood. These phenomena are also quite constant and admit of no exception. The anæmia, therefore, together with the loss of flesh (weight), must necessarily constitute an essential element of the melancholic attack, and I consider these facts of the utmost importance as regards the etiology and treatment of melancholia, as will be seen hereafter. As a corollary I may also mention the morbid alteration of nutrition, as manifested by the boils, eruptions and itching of the skin, the splitting of the hair, etc. At the height of the attack all the secretions seem to be diminished, though I had no opportunity of verifying this assumption by a quantitative analysis of urea, etc., secreted during twenty-four hours.*

The conclusions I have arrived at from observing the phenomena of periodical melancholia may be applied also to the other varieties of melancholia, a short sketch of which I give here.

The state of psychical depression, known as melancholia, is one of the elementary forms of mental diseases, and has been described by Pinel, Esquirol, Falret, Baillarger, Moreau, and a great number of other writers. To Guislain † belongs the merit of having elucidated the fact that the great majority of all mental diseases begin with a melancholic stage, while Griesinger ‡ treated this psychical affection (psychosis) in close relation to nervous diseases in general, and

* After this paper was already sent for publication, the patient had a new attack, which, however, differs favorably from the previous attacks; he is able to read, he sleeps seven hours or more, his appetite and digestion are good, and there are no morbid phenomena in the sphere of the trophic nerves.

† Guislain. Leçons orales. II., p. 162.

‡ Griesinger. Pathologie und Therapie der psych. Krankh. 2 Aufl., p. 213.

Krafft-Ebing* pointed out the analogies of melancholia and neuralgia. Indeed, melancholia can be considered as a psychical pain, a neurosis, a psychical neuralgia of the sensory centres in the cortical substance of the brain, analogous to the neuralgias in the sensitive sphere of the cerebro-spinal axis. In neuralgias the irritability of the affected nervous apparatus is so much altered that the slightest external excitations, mechanical, atmospheric, etc., which would not be felt in the healthy condition, cause great pain. Even those slight but continuous excitations which depend upon the processes of circulation and nutrition, and are therefore normal stimuli and quite imperceptible in the healthy condition, become a constant source of intense pain in neuralgia. The same is the case with psychical hyperæsthesia, called melancholia, with the only difference that in neuralgia the affection is in the sensitive sphere, and manifests itself as bodily pain; in melancholia it is in the psychical sphere, and is felt as psychical pain and depression of spirit.

In the first case the pain is produced by external stimuli, mechanical, atmospheric, etc.; in the second, by psychical perceptions, ideas. In both cases a sympathetic affection in the motor sphere is apt to follow. Thus the part affected by neuralgia is instinctively kept immovable; in like manner the melancholic, affected by psychical pain, lacks power of will, energy, and courage. Again, the convulsive movements which sometimes accompany neuralgia have their analogy in the psychomotor impulses for acts of destruction, so often noticed in melancholics. Lastly, both conditions, neuralgia and melancholia, are sometimes combined in the same subject, and both are often caused by a hereditary disposition, the neuropathic constitution.

* Krafft-Ebing. Die Melancholie. Eine klinische Studie. Erlangen, 1874, p. 3.

We have to distinguish two classes of melancholic affections, melancholia without delirium and melancholia associated with insane ideas, delusions; though there are intermediate forms, and the first can pass into the other. Characteristic of melancholia is the impossibility for the psychical organ to produce any but unpleasant sensations; in other words, it responds with painful emotions to every impression, even to such as otherwise would be quite agreeable. As all the impressions from the outer world are felt in a most painful manner, everything appears to the patient changed and gloomy, and becomes an infinite source of psychical pain. "The painful perception of the outer world," says Krafft-Ebing,* "manifests itself clinically in a passive manner; at the beginning the patient seeks retirement, avoids all association, and remains secluded; but afterward he becomes aggressive towards persons and things." His relations to the surrounding world have now entirely changed; he finds no pleasure in anything, nor can he be touched by the misfortunes of others, his own distress being much more intense than all beside. Thus he lives in constant solitude and apprehension. In cases of melancholia without delirium the intellect remains intact; but as every psychical act augments the psychical pain, the patient avoids all occupation, becomes inert, undecisive, and brooding over his own sadness. He feels weak, his sleep is insufficient and unrefreshing; he has headache, palpitation of the heart, bad appetite, and constipation; he loses flesh and becomes anæmic. All the morbid symptoms generally exacerbate in the morning, and with female patients especially during menstruation, while toward evening a slight remission sometimes takes place.

If the melancholic condition is not relieved spon-

* Loc. cit., p. 5.

taneously or by the efforts of art, or if it has not passed into some form of insanity, the patient usually becomes convinced that there is no remedy for his grief, and, driven to despair, he attempts, and often commits, suicide.

Like in every other nervous affection, so also in melancholia, there are different degrees and varieties of the disease.

Numbers of persons affected with the milder forms of melancholia are continually met with in life. They mostly have a sad and morose countenance, an irritable and changeable disposition, and are generally considered whimsical, and even malicious, until eventually, with the progress of the disease, after a lapse of years, a suicidal attempt in some of these cases will reveal the true nature of their affection. The great majority of those who commit suicide are melancholics. Even the more developed stages of melancholia are not always recognized, and such patients are sometimes considered as *malades imaginaires* or hypochondriacs. One patient of mine, a married lady, living in wealth and luxury, and sincerely attached to her husband and children, suffers for years with melancholia, associated with great distress in the precordial region. Her disease is considered an imaginary one, as no material lesion of any organ can be discovered, and she is generally advised a change of air and travelling, which invariably aggravate her suffering.

Some of these melancholics, especially women, often resort to religious consolations, and are very apt to embrace a new faith, even at the sacrifice of the happiness of their dearest friends. One of these patients consulted me; she had lately become a Roman Catholic, and says that she is now perfectly happy. But it is easy to see that she is only theoretically happy, and that only the name of her affection has been

changed from a simple melancholia to a religious melancholia. She fervently devotes herself to her new religious duties, goes to confession every morning before breakfast, spends hours in meditation, and leads an almost ascetic life. She has become much emaciated, and is threatened with insanity.

A variety of melancholia very frequently met with, especially in men, is hypochondriasis. Here the depression comes from the fear of the patient for his own health, which seems to him greatly imperilled. This state of mind is often induced by some morbid peripheric impressions, caused by a slightly deranged abdominal viscus or any other organ, and these impressions the patient mistakes for dangerous symptoms threatening his life. Hypochondriasis may also be of a central origin, called forth by ideas, by reading medical books or by association with other hypochondriacs. In one of my patients, a gentleman of superior intellect and culture, the hypochondriasis is induced by morbid sensations, originating in the sphere of a branch of the sciatic plexus (left nervus cutaneus femoris posterior). Though looking quite healthy, with all the organs in a perfectly normal condition (except some weakness in the sphere of the sexual organs), he was for years a prey to great fear of paralysis, resulting, as he imagined, from some organic affection of the spinal cord, or of the kidneys, or of the heart, etc.

Melancholia is sometimes accompanied by an intense distress in the precordial region, with palpitation and irregular action of the heart, epigastric pulsation, and other symptoms in the sphere of the vaso-motor nerves—pallor and flushes of the face, cold extremities, contracted pulse, etc. These phenomena must be attributed to the cardiac plexus, and depend very probably on a vaso-motor spasm of the cardiac arteries, as in some cases of angina pectoris. Attacks of pre-

cordial distress in a moderate degree happen, in my opinion, in every case of melancholia. In their highest development (melancholia præcordialis) these acute attacks, more than any other variety of melancholia, are apt to drive the patient to despair, to loss of mind, and to acts of destruction against things, persons, or his own life.

The melancholic state in its further development may become associated with insane ideas, delusions, though occasionally it is so from the beginning. We mostly find this variety of melancholia in cases with extreme precordial distress, and the slight forms of melancholic insanity are generally overlooked. One of my patients, a married lady, of a high moral character, mother of several children, who suffers from melancholy, with precordial distress, is convinced that her unhappy condition is caused by her husband, by incompatibility of their natures; and she is further convinced that she would have been happy had she been married to any one else, or not married at all. And yet her husband is a highly respectable and honorable gentleman, of a beautiful external appearance, of an excellent character and kind disposition, very wealthy, and always ready to spare no expense to satisfy every whim of his wife. She constantly leaves the comforts of her luxurious home, and undertakes long journeys to different places, her principal object being separation from her husband. Her false theory is shared even by her intimate friends, though in reality it is a purely insane idea—a symptom of precordial melancholia with which she is affected.

As the delusions originate from, and are constructed upon the most unpleasant sensations of the patient himself, they must necessarily be of a painful nature. Thus, the intense precordial distress, which even in a healthy person is associated with fear, dreadful appre-

hensions, etc., in the melancholic gives rise to delusions of danger, of persecution, and of death, embracing every imaginable variety of human misery and suffering.

A most frequent source of delusions in melancholics, are hallucinations, which, as may be easily understood, occur sometimes in such nervous and exhausted persons. The patients hear voices announcing their cruel fate; they see bad spirits, or murderers threatening them; morbid gustatory sensations suggest the idea of being poisoned by enemies, etc. Such hallucinations are also the principal cause of the perverted and dangerous acts of melancholics. "Not unfrequently," says Krafft-Ebing,* "is suicide or homicide their direct consequence, and a desperate act of self-defence against imaginary persecutors. Sometimes the decision to remain mute and refuse all nourishment is induced by a hallucination—a voice prohibiting food and speech." Melancholia, with delusions, if not cured, ultimately passes into the passive or active form. In the first variety (melancholia passiva, attonita) the indecision and loss of energy in the patient leads to a complete abolition of all voluntary activity.

Those who have recovered from this affection describe the feelings of terror and suffering they have endured while in a state of obscured consciousness somewhat similar to a dream, and while unable to perform the simplest act, having lost all voluntary power. They therefore remain motionless in bed or in a corner, and finally scarcely react to external excitations. It seems as if there were an insurmountable resistance to the psychomotor conduction. In the highest degree of passive melancholia, the patients are in a state of catalepsy; the limbs are flexible as if of wax (flexi-

* Loc. cit., p. 37.

bilitas cerea), and can remain indefinitely in any given, even uncomfortable position, following only the law of gravitation. There is a high degree of muscular and cutaneous anæsthesia and analgesia, and abolition of reflex irritability; but the vegetative and automatic functions, though considerably weakened, still continue. The eyes express anguish and awe. In the state of passive melancholia the patients do not remain longer than a few months. Sometimes they are suddenly relieved from it as if awakened from a profound sleep; or they pass into some secondary form of insanity, or die during the acme of the disease from paralysis of the nervous centres.

In direct opposition to the passive melancholia is the active variety (melancholia activa, agitans). The patient affected by active melancholia instinctively tries, and sometimes succeeds, to relieve his psychical pain and distress by muscular activity, by constant agitation and locomotion. It seems as if the patient, at the height of his suffering, and by enormous efforts, succeeds at last in overcoming the resistance in the psychomotor sphere, at least for a while. During such a paroxysm of agitation, he runs about in despair, trying to destroy everything, his consciousness being partially or totally obscured.

The active melancholia, if not relieved in a short time, leads to death by exhaustion, or else passes into incurable dementia.

At the autopsy of melancholics we find no material lesions of the brain and its membranes, which exhibit an anæmic condition.

I now pass to the consideration of the practical part of the subject, the causes and treatment of melancholia.

As in all nervous affections, the most important factor in the production of melancholia is a certain disposition, the inherited neuropathic constitution, and

in its highest development known as degenerescence, and described by Morel, Moreau and Legrand du Saulle.* It is progressive in succeeding generations, and this fact, perhaps, explains the increasing tendency to and severity of nervous affections at the present time. The degenerescence manifests itself in different ways—by deformity of the skull, of the ears, the teeth, asymmetry of the face, etc., congenital club-foot and various congenital convulsive and neuralgic affections. Very often there are morbid alterations in the structure or functions of the sexual organs, until in the later generations sterility or impotence put an end to the degenerescent families. Those suffering from degenerescence are often eccentric, and among them the so-called inventors are largely represented. The most trifling causes are generally sufficient to induce the severest nervous diseases, and one of their characteristic features is the periodicity of their nervous affections. In persons of a neuropathic constitution, melancholic affections are easily developed under favorable conditions, called exciting causes, which weaken the nervous system in general, and impair the nutrition of the brain. Thus constant mental anxiety, depressing emotions, especially if long continued and associated with insufficient sleep, irregularity in the function of digestion, with sexual and other excesses. In a number of cases I could trace the origin of melancholia in females to the debilitating influence of diseases incidental to pregnancy and the puerperal state, mostly in those who have suffered from excessive vomiting during pregnancy, and from want of sleep in nursing the child after confinement. To these circumstances I ascribe the fact that melancholia is oftener met with in women than in men.

According to my observations, melancholia is more

* Legrand du Saulle. La folie héréditaire. Paris, 1873.

prevalent in this country than in Europe, and this I ascribe to the early application to business by men, together with want of sleep and irregularities in the digestive and sexual functions.

From the study of the attacks in *periodic melancholia*, I have every reason to believe that the direct cause of melancholia is anæmia of the brain, perhaps only of some part of its cortical substance, induced by a vaso-motor spasm. This assumption is corroborated by the fact that the melancholic attack is accompanied by other phenomena in the vaso-motor sphere—the contracted pulse, the pallor and flushing of the face, the cold extremities, and especially the precordial distress, which latter in the form of angina pectoris, Landois and Nothnagel have shown to be sometimes a pure vaso-motor neurosis following a general spasmodic contraction of the arteries. The alteration of nutrition, the loss of flesh, and the other symptoms of melancholia, are the consequences of cerebral and general arterial anæmia, as I have had the opportunity of observing in the case of periodic melancholia. Of course it is not probable that a spasm should last during the whole melancholic attack, but judging by analogy of other spasmodic affections, the spasms may follow each other in more or less rapid succession, while their effect, which is the nutritive alteration of the brain, may continue during the intervals between the spasms. By admitting this theory, which is based on facts, the phenomena of melancholia can be satisfactorily explained, and the treatment becomes more rational and successful.

The treatment must first be directed against the neuropathic constitution in order to prevent the development of melancholia, and then against the disease itself. As regards the first, I arrived at results that differ from the generally adopted opinion. Those

who are affected with an inherited neuropathic disposition are, as a rule, advised to avoid intellectual occupations; children are not allowed to study much, and grown persons are desired not to devote their time to science, art, etc. They have only to exercise their muscular system, to travel, to sport, and lead otherwise a quiet, idle, almost stupid life. Admitting the necessity of muscular exercise, I maintain that the intellectual exercise of the brain is still more important, not only for the healthy, but also for the neuropathic individuals. That idiots do not live long is an established fact; but it is perhaps less known that even the physically strongest persons, the athletes, if not intellectually developed, seldom, if ever, reach an advanced age, and that the oldest persons in any country are generally also the most intelligent. From the history of a number of my own patients affected with grave nervous and psychical diseases it is evident, beyond any doubt, that intellectual training or exercise of the brain is of the utmost value for the neuropathic persons. Thus a patient of mine whose father died of softening of the brain, who inherited degenerescence in the highest degree, and who has been affected with the worst kind of epilepsy since his youth, is now living in his seventh decade, having preserved all his intellectual faculties. He is a charming poet, a writer of great merit, a student of mathematics and political economy, and possesses a profound knowledge of the literature of different languages. His epileptic attacks were quite alarming; nevertheless, he followed his studies in the universities, and continues them now, often passing whole nights in abstruse mental occupations. The older he grew the milder and less frequent became the attacks; his memory is still good, and he still remains talented and brilliant.

Another patient of mine with inherited degener-

escence had his first severe attack of depression when eight years old. He became in his manhood a confirmed melancholic, and once made a suicidal attempt by cutting his throat with a razor. In spite of the advice of his friends and physicians, in his later years he took up the study of the physiology and pathology of the brain and of psychology, and though now about sixty years of age he is comparatively healthy and suffers no more of melancholia.

It is extremely important for persons disposed to melancholia to avoid associating, and especially living, with melancholics. I have had patients who would probably have escaped this affection had they not come into frequent contact with melancholics. A robust and previously healthy person became melancholic after having lived several years as maid to a lady thus affected, and strange to say both complain of the same morbid symptoms. A young gentleman, the only son of a melancholic mother, and who has never been separated from her, suffers exactly in the same way, though otherwise not resembling his mother. A young lady, daughter of a patient of mine, living in a boarding-school in another city, is generally of a cheerful disposition, but becomes attacked with melancholia whenever her mother makes a long visit to that city, and it takes some time for the young girl to recover after the departure of the mother.

On the contrary, association with gay and humorous people, and healthy amusements, are very beneficial for persons of a neuropathic constitution. The effect of laughing and of comic impressions has some important physiological and psychological significance, as pointed out by Hecker.*

As regards the treatment of the disease itself it is

* Hecker. Die Physiologie und Pathologie des Lachens und des Komischen. Berlin, 1873.

necessary to bear in mind that the psychical organ in this state is unable to produce any but painful sensations, and therefore all kinds of excitation, all impressions, even pleasant ones, have to be avoided, and the patient must be advised to keep quiet bodily and mentally. A few days' rest in bed is sometimes the most beneficial remedy. Exercise, travelling, admonition, and religious consolations only aggravate the psychical hyperæsthesia. On the contrary, everything that produces relaxation of the vaso-motor spasm, and congestion to the brain, acts beneficially. Thus prolonged tepid baths and above all opiates, though only palliatives, often make life endurable, especially in the variety of melancholia with great precordial distress.

Other remedies which act similarly may also be tried, like inhalations of ether, chloroform, nitrite of amyl, chloral, etc. I have not tried alcohol, which also produces congestion to the brain, on account of its secondary injurious effects upon the system. Being absorbed by the blood, alcohol retards the oxidizing processes and the tissue metamorphosis, which seem already weakened during the melancholic attack.

From my own experience I have every reason to believe that the most efficient remedy to abolish the vaso-motor spasm, to regulate the circulation of blood in the brain, and to improve its nutrition, is the galvanic current, applied according to a certain method, the details of which will be given in a separate paper.

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